A 88.11/17: Report No 11

REPORT NO. 11

UNIV. OF FL LIB.
DOCUMENT DEPT.
U.S. DEPOSITORY

HUME LIBRARY
JAN 30 1979
UF Univ. of Florida

Cotton Fiber and Processing Test Results

CROP of 1978

Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 26, 1979

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.1/ These reports are available on request from the Standards Section, Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN, 38122.

1/ Summary of Cotton Fiber and Processing Test Results, Crop of 1977, USDA, AMS, Cotton Division, August 1978.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1978

Discussion of Test Results

Short staple cottons tested from the Southwest through January 19 are shorter, less uniform and finer than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Both Shirley Analyzer non-lint content and picker and card waste are higher than last season. Yarns spun from these samples are weaker but have higher appearance grades. Imperfections are lower. The spinning potential yarn number is lower.

Southeast medium staple samples tested to date show fibers to be longer, finer and stronger than a year ago. Shirley Analyzer non-lint content is higher while picker and card waste is slightly lower than last season. Yarns spun from these samples show stronger skein strength and lower imperfections. The spinning potential is higher.

South Central medium staple samples show fibers to be shorter and stronger at zero gage strength tests than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples tested from the Southwest are much shorter, less uniform and stronger at zero gage strength tests. Both Shirley Analyzer and picker and card waste is higher. Yarns spun from these samples are weaker with lower appearance grades. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples tested from the West are longer, less uniform, coarser and weaker at 1/8" gage strength tests. Both Shirley Analyzer non-lint content and picker and card waste are higher. Yarns spun from these samples are weaker with lower appearance grades. Imperfections are lower.

Average results for all medium staple samples tested show fibers to be less uniform and stronger at zero gage strength tests than a year ago. Both Shirley Analyzer non-lint content and picker and card waste are higher. Yarn imperfections are lower than a year ago. The spinning potential yarn number is lower.

No long staple lots were received from the Southeast or South Central areas during this period.

Long staple samples tested from the West to date are shorter, less uniform, finer and weaker than a year ago. Both Shirley Analyzer non-lint content and picker and card waste are higher. Comber waste is much higher than a year ago. Yarns spun from these samples are weaker, but have higher appearance grades. Combed yarn imperfections are higher. The spinning potential yarn number is lower.

American Pima extra long staple samples tested to date have approximately the same length, uniformity and fineness as a year earlier. Shirley Analyzer non-lint content, picker and card waste and comber waste are much higher than last season. Combed yarns have a higher appearance index.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 19, 1979. 1/

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results				
		Fibrograph		Mike fineness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appearance	Imperfections	
	No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.
									22s Carded Yarn			
Short Staple:												
Southwest												3/
1977	99	0.99	46	42	88	22	3.2	5.4	99	108	13	- 49
1978	70	0.97	44	40	88	22	4.3	7.3	95	119	9	(15) 44
Medium Staple:												
Southeast												
1977	40	1.08	45	47	85	22	3.2	6.2	97	92	21	- 52
1978	36	1.10	45	45	86	23	3.5	6.0	108	92	15	(77) 58
South Central												
1977	123	1.11	45	46	86	23	3.5	6.0	104	95	22	- 57
1978	124	1.09	45	46	88	23	3.5	6.5	100	95	13	(55) 51
Southwest												
1977	48	1.08	46	42	86	22	3.2	5.7	103	90	19	- 54
1978	43	1.03	45	43	89	22	4.4	6.5	99	82	16	(80) 50
West												
1977	92	1.11	46	43	93	26	2.6	5.4	117	87	22	- 67
1978	85	1.13	45	44	93	25	2.8	5.7	116	85	21	(109) 66
Average												
1977	303	1.10	46	45	88	23	3.2	5.8	107	91	21	- 59
1978	288	1.10	45	45	89	23	3.4	6.2	106	90	16	(77) 56
Significant difference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

3/ Perentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 19, 1979 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results								
		Length		Mike	Strength		SA Non-lint	P&C Waste	Comber Waste	Yarn Quality						SPY
		Span	Unif		Zero gage	1/8" gage				Strength		Appearance		Imprfctns		
										carded	combed	carded	combed	card	comb	
	No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.
										22s Carded & Combed Yarn						
Long Staple:																
Southeast																
1977	12	1.13	45	48	88	23	3.5	7.1	17.6	99	122	102	116	18	5	58
1978	15	1.12	44	44	85	24	3.4	7.7	16.6	111	128	106	126	12	3	59
South Central																
1977	3	1.16	45	45	92	24	4.3	7.2	18.0	106	128	97	113	24	6	63
1978	3	1.18	43	42	91	26	4.3	8.7	17.4	110	133	93	123	22	6	66
West																
1977	9	1.18	46	40	92	27	3.5	6.2	14.7	130	148	89	99	27	7	93
1978	6	1.14	43	37	88	25	3.6	8.5	17.5	116	138	90	112	27	10	73
Extra Long Staple:		AMERICAN PIMA														
West		Array										50's Combed Yarn				
1977	18	1.50	32	38	104	36	3.0	7.1	14.4		64		107		2	
1978	13	1.49	33	37	102	35	3.2	7.7	15.7		65		115		1	
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s) 2(50s)	5	5	2	2	3

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns									
			Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns Neps/M Yards		Spin. Potential
No	Grade Name & Code	Stple	2.5% span	Unif		Zero Gage	1/8" Gage			Gra	Yel		8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHWEST AREA																					
NORTHWEST TEXAS																					
ANSON							LANKART 611						100 PERCENT						1/	1/	
1 LM	51	2/ 33	1.04	42	30	82	22	7.9	4.8	2	3	7.1	279	99	8.1	7.4	120	110	38(0)	17 (58)	53
BIG SPRING							NORTHERN STAR 5						75 PERCENT								
1 SLM LT SP	42	31	0.98	44	44	89	23	7.0	4.8	3	3	7.0	270	90	7.3	6.1	130	130	16(0)	8 (12)	42
EARTH							PAYMASTER 303						90 PERCENT								
2 SLM LT SP	42	32	0.99	43	35	84	22	7.1	4.8	4	4	6.6	288	97	7.7	6.9	130	120	36(4)	10 (22)	49
3 SLM LT SP	42	31	0.99	42	34	79	20	6.6	5.4	4	4	8.3	275	92	7.7	6.8	120	120	18(12)	9 (20)	46
KRESS							STRIPPER 32						80 PERCENT								
3 SLM LT SP	42	32	0.99	43	34	87	22	6.7	3.2	4	4	6.6	275	90	7.2	6.4	130	120	16(2)	11 (20)	43
LAMESA							BLIGHTMASTER A5						75 PERCENT								
3 MID LT SP	32	30	0.92	42	30	84	21	7.0	4.4	2	4	7.6	269	88	7.3	6.7	120	110	23(0)	10 (2)	33
LEVELLAND							PAYMASTER 303						70 PERCENT								
2 SLM LT SP	42	32	0.99	42	35	86	22	7.3	4.1	2	3	6.7	282	93	7.8	6.6	130	120	38(0)	12 (6)	46
LORENZO							PAYMASTER 303						70 PERCENT								
4 SLM LT SP	42	32	1.02	42	35	81	20	6.5	3.4	2	3	6.5	285	91	8.0	6.7	120	130	19(0)	9 (10)	48
PADUCAH							LANKART 611						75 PERCENT								
2 MID LT SP	32	31	0.99	46	45	85	22	7.5	3.2	2	4	7.1	285	93	7.8	7.0	120	120	19(4)	10 (22)	46
PLAINS							GSA71						70 PERCENT								
2 LM LT SP	52	3/ 32	1.01	44	31	84	22	8.1	5.6	3	3	8.3	302	99	8.1	7.0	130	120	38(4)	9 (14)	51
PLAINVIEW							GSA71						75 PERCENT								
3 SLM LT SP	42	32	1.00	43	37	84	23	6.6	4.7	3	3	7.4	285	95	7.4	6.5	130	110	19(4)	5 (16)	42

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.
2/ Reduced from 41 because of bark.
3/ Reduced from 42 because of bark.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns										
			Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C	Strength		Elongation		Appearance Index		Imprfect'ns Neps/M Yards		Spin. Poten-tial
No	Grade Name & Code	Stple	2.5% span	Unif		Zero Gage	1/8" Gage			Gra	Yel	Waste	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHWEST Continued																					
POST							STRIPPER 31						80 PERCENT								
3 LM	51	32	1.00	43	39	86	22	7.0	4.5	2	3	7.4	301	100	7.8	6.5	130	120	23 (2) 1/	10 (26) 1/	51
SUDAN							QUAPAW						80 PERCENT								
4 SLM LT SP	42	32	1.00	44	38	87	23	7.0	4.9	3	4	8.1	300	99	7.4	6.7	130	120	18 (2)	9 (8)	45
TULIA							STRIPPER 31						75 PERCENT								
2 LM LT SP	52	31	0.92	44	39	85	21	6.9	6.3	3	4	9.1	277	87	7.3	6.3	130	130	17 (2)	10 (12)	38
VERNON							LOCKETT 77						100 PERCENT								
2 SLM	41	33	1.03	44	39	95	24	5.9	3.8	2	3	6.8	312	105	6.9	6.3	130	130	17 (4)	7 (8)	52
WEINERT							LANKART LX571						80 PERCENT								
1 SLM	41	33	1.05	44	41	80	22	7.4	3.9	1	3	5.8	300	102	8.0	7.3	120	120	40 (8)	16 (30)	55
WINGATE							TAMCOT SP21						93 PERCENT								
2 LM	51	33	1.03	42	40	81	22	6.6	5.2	3	3	8.2	281	110	7.6	6.7	130	120	22 (2)	8 (16)	51
OKLAHOMA																					
GREENFIELD							WESTBURN M						75 PERCENT								
2 SLM LT SP	42	32	1.00	43	39	87	25	7.3	4.5	2	4	7.1	297	97	7.4	6.5	130	130	29 (2)	12 (24)	47
MANGUM							LANKART 57						99 PERCENT								
3 MID LT SP	32	31	0.96	44	49	84	22	6.7	3.1	2	4	6.9	257	84	7.0	6.1	120	110	18 (0)	8 (42)	34
TEMPLE							LANKART 611						70 PERCENT								
3 SLM LT SP	42	32	0.98	45	40	87	22	6.7	3.7	2	3	7.0	274	89	6.7	6.0	130	120	19 (4)	10 (10)	40
WILLOW							LANKART 57						79 PERCENT								
2 MID LT SP	32	32	0.99	44	45	85	21	7.5	3.4	2	4	5.9	274	90	7.5	6.5	130	130	26 (6)	9 (8)	43
3 SLM LT SP	42	32	1.00	43	41	86	22	6.8	4.9	2	4	7.5	279	96	7.5	6.8	120	120	24 (16)	11 (16)	47
WEST AREA																					
NEW MEXICO																					
TUCUMCARI							RILCOT 90						75 PERCENT								
1 SLM LT SP	42	31	0.92	45	36	88	22	7.0	3.7	2	3	7.0	310	103	7.7	6.8	120	130	25 (6)	13 (14)	43
2 SLM	41	32	0.93	45	38	90	21	6.2	3.8	2	3	6.6	290	94	7.3	6.6	130	130	18 (0)	5 (8)	53

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns										
			Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns Neps/M Yards		Spin. Potential
No	Grade Name & Code	Stple	2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHWEST AREA																					
NORTHWEST TEXAS																					
BIG SPRING							TAMCOT SP37						70 PERCENT								
2 SLM LT SP	42	31	0.95	44	35	89	23	6.3	4.6	3	4	7.5	76	25 2/	5.4	4.7	90	60	18 (74) 1/	15 (118) 1/	25 3/
PLAINS							DUNN 119						90 PERCENT								
2 LM	51 4/	34	1.08	42	30	86	25	6.2	5.0	2	3	8.2	111	39	6.8	5.3	70	60	26 (62)	21 (304)	64
WEST AREA																					
ARIZONA																					
BOWIE							STONEVILLE 213						74 PERCENT								
3 MID	31	34	1.04	43	45	83	21	6.6	2.4	0	3	6.1	82	25 5/	5.7	4.7	80	60	24 (86)	17 (272)	37
CASHION							DELTAPINE 61						93 PERCENT								
3 SLM	41	35	1.10	43	45	83	23	7.1	2.5	2	2	4.8	96	30	6.1	4.4	100	60	22 (72)	13 (358)	48
GILA BEND							STONEVILLE 213						100 PERCENT								
3 SLM PLUS	40	35	1.11	44	44	90	23	6.6	2.5	1	2	5.0	103	35	6.0	4.7	100	70	18 (72)	12 (350)	57
MOHAVE VALLEY							STONEVILLE 825N						90 PERCENT								
2 SLM	41	33	1.06	42	47	96	22	5.0	3.2	2	2	6.9	78	22 2/	4.5	3.7	90	60	13 (66)	14 (172)	33
PARKER							DELTAPINE 61						99 PERCENT								
3 SLM	41	35	1.10	45	49	88	25	7.0	2.4	2	2	5.3	101	33	6.3	4.5	100	60	24(100)	15 (422)	51
ROLL							DELTAPINE 61						90 PERCENT								
4 SLM	41	35	1.06	42	36	90	24	7.5	3.0	2	2	6.6	96	33	6.0	4.7	80	60	26 (80)	18 (578)	47

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.
2/ End breakage too high to spin 50's yarn. 36's yarn spun and strength adjusted to equivalent of 50's.
3/ End breakage too high to spin the coarsest desired yarn number. The reported number is an estimated value below the range of the test.
4/ Reduced from 41 because of bark.
5/ End breakage too high to spin 50's yarn. 44's yarn spun and strength adjusted to equivalent of 50's.

Table 4--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns										
			Digital Fibrograph			Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfect'ns Neps/M Yards		Spin. Potential
No	Grade Name & Code	Stple	2.5% span	Unif.	Mike	Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
WEST		AREA																				
NEW MEXICO																						
LAS CRUCES							ACALA 1517-75						85 PERCENT							1/	1/	
3 SLM	41	37	1.15	43	32	90	27	6.2	4.1	1	2	8.5	129	46	6.3	5.1	90	70	25	(48) 19	(266)	89
											*	16.3	154	55	6.8	5.4	110	100	8	(84) 7	(300)	
WEST TEXAS																						
PECOS		2/					COKER 310						98 PERCENT									
3 LM	51	35	1.12	41	35	83	24	6.6	3.7	2	3	9.3	101	35	6.4	5.1	90	60	25	(14) 19	(278)	57
											*	18.5	126	44	7.0	5.6	110	100	9	(60) 7	(324)	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.
2/ Reduced from 41 because of bark.

* Comber Waste and Combed Yarn Data

Table 5--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Combed Yarns									
			Array Length		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfect'ns Neps/M Yards	
No	Grade Name & Code	Stple	UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No
WEST		AREA																			
ARIZONA																					
SAFFORD							PIMA S-5						100 PERCENT								
2	4	46	1.50	30	39	104	35	7.5	3.7	4	6	7.6	15.1	64	33	6.2	4.8	120	110	1 (26) 1/	1(76) 1/
WENDEN							PIMA S-5						99 PERCENT								
3	4	46	1.47	33	39	103	36	7.1	2.7	3	5	6.9	14.4	65	35	5.7	4.9	120	120	1 (28)	1(102)
WEST TEXAS																					
EL PASO							PIMA S-5						100 PERCENT								
2	4	46	1.47	35	32	99	33	7.4	4.3	4	5	9.1	15.4	66	34	6.0	4.9	110	100	2(108)	3(212)
EL PASO							PIMA S-5						100 PERCENT								
3	4	46	1.48	36	32	98	31	7.1	3.0	4	6	7.7	23.9	63	35	6.3	5.3	110	100	2 (58)	1(170)

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

UNIVERSITY OF FLORIDA
3 1262 08583 1039